

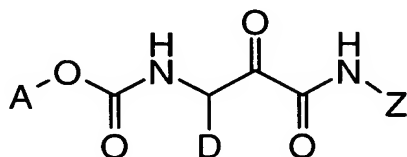
Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the Claims:

What is claimed is:

Claim 1 (Original): A compound of Formula (I):



(I)

or a salt, solvate, or physiologically functional derivative thereof:
wherein

A is the group defined by $(Q^3)-(Q^2)_n-(Q^1)-(Q)_m-$, wherein
Q is CH_2 and m is 0, 1, or 2

Q^1 is C_3 - C_7 cycloalkylene;

Q^2 is C_1 - C_3 alkylene and n is 0 or 1, or

Q^2 is OR, where R is C_1 - C_3 alkylene and n is 1,

Q^2 is SR, where R is C_1 - C_3 alkylene and n is 1; or

Q^2 is $\text{N}(\text{R}')\text{R}$, where R' is hydrogen or C_1 - C_6 alkyl, R is C_1 - C_3 alkylene and n is 1; and

Q^3 is aryl, heteroaryl, or aryl or heteroaryl substituted with at least one independently selected R^1 group;

D is C_1 - C_6 alkyl or C_1 - C_6 alkyl substituted with $-\text{NR}^2\text{R}^3$;

Z is the group defined by $-(X)_p-(X^1)_q-(X^2)$, wherein

X is $C(R')(R'')$, wherein R' is hydrogen or C₁-C₆ alkyl, R'' is hydrogen and C₁-C₆ alkyl, and p is 0, 1, or 2,

X¹ is $C(O)OCH_2$, wherein q is 0 or 1, and

X² is aryl, heteroaryl, or heterocyclyl;

R¹ is halo, C₁-C₆ alkyl, aryl, heterocyclyl, or C₁-C₆ haloalkyl;

R² is hydrogen or C₁-C₆ alkyl;

R³ is hydrogen, C₁-C₆ alkyl, $-C(O)R^4$, or $-S(O)_2NR^5R^6$;

R⁴ is heterocyclyl, $-NR^5R^6$, and

R⁵ and R⁶ are independently selected from hydrogen or C₁-C₆ alkyl.

Claims 2-4 (Cancelled):

Claim 5 (Original): A compound as claimed in claim 1, wherein Q is CH₂ and m is 0, 1, or 2.

Claim 6 (Original): A compound as claimed in claim 1, wherein Q is CH₂ and m is 0 or 1.

Claim 7 (Original): A compound as claimed in claim 1, wherein Q is CH₂ and m is 1.

Claim 8 (Original): A compound as claimed in claim 1, wherein Q¹ is C₃-C₇ cycloalkylene.

Claim 9 (Original): A compound as claimed in claim 1, wherein Q¹ is selected from the group cyclobutylene, cyclopentylene or cyclohexylene,

Claim 10 (Original): A compound as claimed in claim 1, wherein Q¹ is cyclobutylene.

Claim 11 (Original): A compound as claimed in claim 1, wherein Q^2 is C_1-C_3 alkylene and n is 0 or 1.

Claim 12 (Original): A compound as claimed in claim 1, wherein Q^2 is C_1-C_3 alkylene and n is 1.

Claim 13 (Original): A compound as claimed in claim 1, wherein Q^2 is OR, wherein R is C_1-C_3 alkylene and n is 1.

Claim 14 (Original): A compound as claimed in claim 1, wherein Q^2 is SR, wherein R is C_1-C_3 alkylene and n is 1.

Claim 15 (Original): A compound as claimed in claim 1, wherein Q^3 is aryl or aryl substituted with at least one independently selected R^1 group.

Claim 16 (Original): A compound as claimed in claim 1, wherein Q^3 is phenyl or phenyl substituted with at least one independently selected R^1 group wherein R^1 is halo or C_1-C_6 alkyl.

Claim 17 (Original): A compound as claimed in claim 16, wherein R^1 is halo.

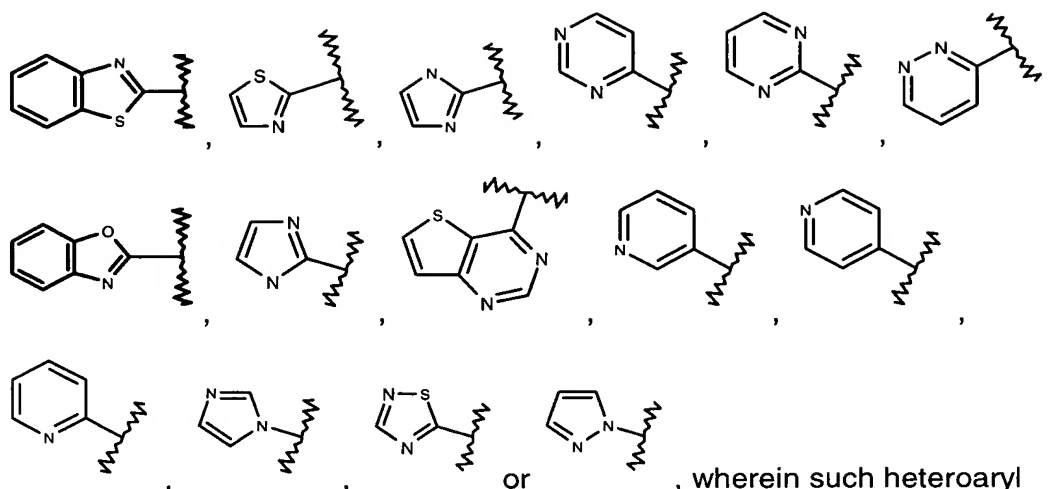
Claim 18 (Cancelled):

Claim 19 (Original): A compound as claimed in claim 16, wherein R^1 is C_1-C_6 alkyl.

Claim 20 (Cancelled):

Claim 21 (Original): A compound as claimed in claim 1, wherein Q^3 is heteroaryl or heteroaryl substituted with at least one independently selected R^1 .

Claim 22 (Original): A compound as claimed in claim 1, wherein Q^3 is selected from the group



, wherein such heteroaryl group is substituted with at least one independently selected R^1 , wherein R^1 is halo, C_1 - C_6 alkyl, aryl, heterocyclyl, or C_1 - C_6 haloalkyl.

Claims 23-27 (Cancelled):

Claim 28 (Original): A compound as claimed in claim 1, wherein D is C_1 - C_6 alkyl or C_1 - C_6 alkyl substituted with $-NR^2R^3$, wherein R^2 is hydrogen and R^3 is $-C(O)R^4$ or $-S(O)_2NR^5R^6$.

Claim 29 (Original): A compound as claimed in claim 1, wherein D is C_1 - C_6 alkyl.

Claims 30-33 (Cancelled):

Claim 34 (Original): A compound as claimed in claim 1, wherein X is $C(R')(R'')$, wherein R' is hydrogen or C_1 - C_6 alkyl, R'' is hydrogen and C_1 - C_6 alkyl, and p is 0, 1, or 2.

Claim 35 (Original): A compound as claimed in claim 1, wherein X is $C(H)(R'')$ where R'' is hydrogen and p is 0, 1, or 2.

Claim 36 (Original): A compound as claimed in claim 1, wherein X is $C(H)(R'')$ where R'' is hydrogen and p is 0 or 1.

Claim 37 (Original): A compound as claimed in claim 1, wherein X is C(H)(R'') where R'' is hydrogen and p is 0.

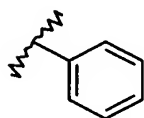
Claim 38 (Original): A compound as claimed in claim 1, wherein X is C(H)(R'') where R'' is -CH₃ and p is 1.

Claim 39 (Original): A compound as claimed in claim 1, wherein X¹ is C(O)OCH₂, wherein q is 1.

Claim 40 (Original): A compound as claimed in claim 1, wherein X¹ is C(O)OCH₂, wherein q is 0.

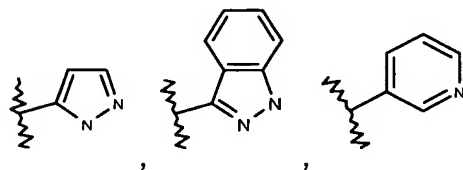
Claim 41 (Original): A compound as claimed in claim 1, wherein X² is aryl.

Claim 42 (Original): A compound as claimed in claim 1, wherein X² is



Claim 43 (Original): A compound as claimed in claim 1, wherein X² is heteroaryl or heterocycl.

Claim 44 (Original): A compound as claimed in claim 1, wherein X² is selected from the group



, or substituted derivatives thereof.

Claim 45 (Original): A compound selected from the group consisting of:

1-benzylcyclobutyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 1-benzylcyclopentyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 benzyl(2S)-2-{[(3S)-3-{[(1-benzylcyclopentyl)oxy]carbonyl}amino)-2-oxoheptanoyl]amino}propanoate;
 1-benzylcyclohexyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 (1-Benzylcyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino} acetyl) pentyl carbamate;
 [1-(2-Phenylethyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl] amino} acetyl) pentylcarbamate;
 [1-(3-Phenylpropyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino} acetyl) pentylcarbamate;
 (1-Benzylcyclopentyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl) pentyl carbamate;
 (1-benzylcyclohexyl)methyl (1S)-5-[(4-morpholinylcarbonyl)amino]-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 [1-(4-Fluorobenzyl)cyclobutyl]methyl (1S)-5-[(4-morpholinylcarbonyl)amino]-1-(oxo {[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 [1-(4-Pyridinylmethyl)cyclobutyl]methyl (1S)-5-[(4-morpholinylcarbonyl)amino]-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 [1-(3-pyridinylmethyl)cyclobutyl]methyl (1S)-5-[(4-morpholinylcarbonyl)amino]-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 [1-(2,6-difluorobenzyl)cyclobutyl]methyl (1S)-5-[(methylamino)carbonyl]amino)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
 [1-(4-Fluorobenzyl)cyclobutyl]methyl (1S)-1-[oxo(1H-pyrazol-5-ylamino)acetyl] pentylcarbamate;
 [1-(4-fluorobenzyl)cyclobutyl]methyl (1S)-1-[[6-chloro-1H-indazol-3-yl]amino](oxo) acetyl]pentylcarbamate;
 [1-(4-fluorobenzyl)cyclobutyl]methyl (1S)-5-[(dimethylamino)sulfonyl]amino)-1-{oxo[(3-pyridinylmethyl)amino]acetyl}pentylcarbamate;

1-(1,3-Benzothiazol-2-yl)cyclopentyl (1S)-1-[oxo(1H-pyrazol-3-ylamino)acetyl] pentylcarbamate;

{1-[(4-phenyl-1,3-thiazol-2-yl)methyl]cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

(1-{[(1-methyl-1H-imidazol-2-yl)sulfanyl]methyl}cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

(1-{[(2-chloro-4-pyrimidinyl)oxy]methyl}cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

[1-({[2-(4-methyl-1-piperazinyl)-4-pyrimidinyl]oxy}methyl)cyclobutyl] methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

[1-({[2-(4-morpholinyl)-4-pyrimidinyl]oxy}methyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

{1-[(2-pyrimidinylsulfanyl)methyl]cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

{1-[(1,3-benzoxazol-2-ylsulfanyl)methyl]cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

{1-[(1,3-thiazol-2-yloxy)methyl]cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

(1-{[(3-phenyl-1,2,4-thiadiazol-5-yl)oxy]methyl}cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

[1-({[2-(4-phenyl-1-piperazinyl)-4-pyrimidinyl]oxy}methyl)cyclobutyl] methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

(1-{[(1-phenyl-1H-imidazol-2-yl)sulfanyl]methyl}cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

{1-[(thieno[3,2-d]pyrimidin-4-yloxy)methyl]cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

{1-[(2-pyrimidinyl)oxy]methyl}cyclobutyl)methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

[1-({[4-(4-methylphenyl)-1,3-thiazol-2-yl]oxy}methyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

[1-(hydroxymethyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;

[1-({[4-(4-chlorophenyl)-2-pyrimidinyl]sulfanyl)methyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
[1-({[5-(4-chlorophenyl)-1-methyl-1H-imidazol-2-yl]sulfanyl)methyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
{1-[(4-methyl-1,3-thiazol-2-yl)methyl]cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
(1-{2-[(1-methyl-1H-imidazol-2-yl)sulfanyl]ethyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
(1-{3-[(1-methyl-1H-imidazol-2-yl)sulfanyl]propyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate; and
(1-{3-[(2-chloro-4-pyrimidinyl)oxy]propyl)cyclobutyl]methyl (1S)-1-(oxo{[(1R)-1-phenylethyl]amino}acetyl)pentylcarbamate;
or a salt, solvate, or physiologically functional derivative thereof.

Claim 46 (Currently Amended): A pharmaceutical composition comprising a therapeutically effective amount of a compound as claimed in claim 1 ~~claims 1 to 44~~, or a salt, solvate, or a physiologically functional derivative thereof and one or more of pharmaceutically acceptable carriers, diluents and excipients.

Claim 47 (Currently Amended): A method of treating a disorder in a mammal, said disorder being characterized by enhanced bone turnover which can ultimately lead to fracture, comprising: administering to said mammal a therapeutically effective amount of a compound as claimed in claim 1 ~~claims 1 to 44~~ or a salt, solvate or a physiologically functional derivative thereof.

Claim 48 (Currently Amended): A method of treating a disorder in a mammal, said disorder being characterized by bone loss, comprising: administering to said mammal a therapeutically effective amount of a compound as claimed in claim 1 ~~claims 1 to 44~~ or a salt, solvate or a physiologically functional derivative thereof.

Claims 49-50 (Cancelled):

Claim 51 (Currently Amended): A method of treating osteoporosis, comprising: administering to said mammal a therapeutically effective amount of a compound as claimed in claim 1 ~~claims 1 to 44~~, or a salt, solvate or physiologically functional derivative thereof.

Claim 52 (Currently Amended): A method of treating osteoporosis, comprising: administering to said mammal therapeutically effective amounts of (i) a compound as claimed in claim 1 ~~claims 1 to 44~~, or a salt, solvate or physiologically functional derivative thereof and (ii) at least one bone building agent.